

REMARKS

Claims 1-13 and 15-21 are pending in this application.

Applicants have amended claims 1, 15-18, and 20, and have canceled claims 14 and 22-49. The changes to the claims made herein do not introduce any new matter.

Cancellation of Non-Elected Claims

Among other claims that have been canceled herein, Applicants have canceled claims 22-49, which are directed toward non-elected species. Applicants reserve the right to pursue claims 22-49 in one or more timely filed divisional applications.

Allowable Subject Matter

Applicants appreciate the Examiner's indication that claims 17, 18, and 20 define allowable subject matter. Applicants have rewritten claims 18 and 20 in independent form to place these claims in condition for immediate allowance. Applicants' responses to the rejections entered in the Office Action are set forth in the discussion below.

Rejection Under 35 U.S.C. § 102

Applicants respectfully request reconsideration of the rejection of claims 1, 2, 4-16, and 21 under 35 U.S.C. § 102(e) as being anticipated by *Pop* (US 7,251,058 B2) (as noted above, claim 14 has been canceled). As will be explained in more detail below, the *Pop* reference does not disclose each and every feature of independent claim 1, as amended herein.

Applicants have amended independent claim 1 to include the features specified in original claim 14. In light of the changes to claim 1, Applicants have canceled claim 14.

The features of original claim 14, which are now recited in claim 1, include, among other features:

(b1) determining an outermost shell color separation ink quantity set associated with outermost shell chromatic color, where the outermost shell chromatic color refers to chromatic color at an outermost shell location within the primary color space, the outermost

shell color separation ink quantity set being used for reproducing extended chromatic color that is reproducible with the ink set and that has higher saturation than the outermost shell chromatic color;

(b2) determining the plurality of reproduction colors associated respectively with the plurality of input colors within the primary color space, based on the relationship between the outermost shell chromatic color and the outermost shell color separation ink quantity set; and

determining the extended chromatic color as a color represented by an extended chromatic color vector of greater length having a same direction as an outermost shell chromatic color vector representing the outermost shell chromatic color in the primary color space, and determining the outermost shell color separation ink quantity set for reproducing the extended chromatic color.

The above-listed features are illustrated in Figures 12, 13(a)-13(c), 14(a)-14(b), and described in the corresponding explanations of these figures in the specification. The color “m” in Figures 13(a)-13(c) and 14(a)-14(b) corresponds to the outermost shell chromatic color. The color “em” in Figures 13(a)-13(c) and 14(a)-14(b) corresponds to the extended chromatic color. The ink quantity set “emp” in Figure 13(c) corresponds to the outermost shell color separation ink quantity set. The color “T” in Figures 13(a) and 13(c) corresponds to the input color. The color reproduced by the provisional color separation ink quantity set “P” in Figure 13(c) corresponds to the reproduction color.

The outermost shell color separation ink quantity set “emp” is associated with the outermost shell chromatic color “m.” The outermost shell color separation ink quantity set “emp” represents the extended chromatic color “em.” The saturation of the extended chromatic color “em” is higher than that of the outermost shell chromatic color “m.” In the primary color space, the extended chromatic color “em” is represented by an extended vector of greater length having a same direction as a vector representing the outermost shell

chromatic color “m.” Furthermore, the reproduction color associated with the input color “I” is determined based on the relationship between the outermost shell chromatic color “m” and the outermost shell color separation ink quantity set “emp.”

The *Pop* reference does not disclose each and every feature specified in present claim

1. The portions of the *Pop* reference that are pertinent to the claimed subject matter include the following:

1) “The purpose of this screen is to ensure that only primary colors are used near the neutral areas of the gamut; that is, it is not preferable to use non-primary inks to reproduce colors where primary inks will suffice because non-primary inks are needed to extend the gamut volume. The core of the gamut is where the primaries alone are used, with CMY colors residing at the top and middle of the gamut and black gradually filling in at the bottom. Non-primaries are restricted to the outside portions of the gamut, in the area surrounding the core, adding additional gamut volume and surface area near their respective natural hues.” (Column 9, lines 24-35);

2) “The chroma screen helps to ensure that the non-primary colors are used mostly at the outer boundaries of the gamut, less often in the middle areas, very little near the gamut core, and not at all within the core itself where the primary colors are dominant.” (Column 9, lines 35-39); and

3) “There are four types of rendering intent considered in the profile building process, namely:...Perceptual-...Saturation-...Relative Colorimetric-...Absolute Colorimetric-....” (Column 10, lines 36-55).

In light of the above, the *Pop* reference does not disclose at least the following features specified in present claim 1:

the extended chromatic color “em” (the outermost shell color separation ink quantity set “emp”) is represented by an extended vector or greater length having a same direction as a

vector representing the outermost shell chromatic color “m” (the extended chromatic color “em” (the outermost shell color separation ink quantity set “emp”) is associated with the outermost shell chromatic color “m”); and

the reproduction color associated with the input color “I” within the primary color space is determined based on the relationship between the outermost shell chromatic color “m” and the outermost shell color separation ink quantity set “emp.”

By virtue of the above-listed features of the presently claimed subject matter, color separation process results can be derived readily, even with a spot color ink.

Accordingly, for at least the foregoing reasons, independent claim 1, as amended herein, is patentable under 35 U.S.C. § 102(e) over *Pop*. Claims 2, 4-13, 15, and 16, each of which ultimately depends from claim 1, are likewise patentable under 35 U.S.C. § 102(e) over *Pop* for at least the same reasons set forth above regarding claim 1.

With regard to claim 21, this claim depends from claim 20, which has been rewritten in independent form. In light of the Examiner’s indication that claim 20 defines allowable subject matter, claim 21 is believed to define allowable subject matter for at least the reason that this claim depends from claim 20.

Rejection Under 35 U.S.C. § 103

Applicants respectfully request reconsideration of the rejection of claims 3 and 19 under 35 U.S.C. § 103(a) as being unpatentable over *Pop* in view of *Kita et al.* (“*Kita*”) (US 5,502,579). Each of claims 3 and 19 depends from claim 1. The deficiencies of the *Pop* reference relative to the subject matter defined in present claim 1 are discussed above in connection with the anticipation rejection of claim 1. The *Kita* reference does not cure the above-discussed deficiencies of the *Pop* reference relative to the subject matter defined in present claim 1. Accordingly, claims 3 and 19 are patentable under 35 U.S.C. § 103(a) over

the combination of *Pop* in view of *Kita* for at least the reason that each of these claims depends from claim 1.

Conclusion

In view of the foregoing, Applicants respectfully request reconsideration and reexamination of claims 1-13 and 15-21, as amended herein, and submit that these claims are in condition for allowance. Accordingly, a notice of allowance is respectfully requested. In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 749-6902. If any additional fees are due in connection with the filing of this paper, then the Commissioner is authorized to charge such fees to Deposit Account No. 50-0805 (Order No. MIPFP078).

Respectfully submitted,
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